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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,388	03/12/2004	Igor Seleznev	0492611-0545/MIT9277CON2	7295

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Patent Department
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EXAMINER

COOKE, COLLEEN P

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,388

Applicant(s)

SELEZNEV ET AL.

Examiner

Colleen P Cooke

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-84 is/are pending in the application.
4a) Of the above claim(s) 63-84 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 40-62 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☒ Claim(s) 40-84 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 40-62, drawn to a process, classified in class 427, subclass 62.
- II. Claims 63-84, drawn to a product, classified in class 428, subclass 701.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed merely a c-axis textured superconducting film, which made be made by processes which do not require conversion, such as direct sputter deposition of the superconducting material or growth of the superconducting material from a seed layer.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Valerie Rosen on 2/17/05 a provisional election was made with traverse to prosecute the invention of Group I, claims 40-62. Affirmation of this election must be made by applicant in replying to this Office action. Claims 63-84 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 1754

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 40-62 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 40-63 of copending Application No. 10/194,561. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 40 of the instant application, containing the additional limitation of converting "under conditions that enable the removal of HF from the film surface" appears to be encompassed by the processing conditions detailed in some or all of

Art Unit: 1754

claims 40-62 because the copending claims describe conditions which enable removal of HF from the film surface.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 40-47, 50-56 and 59 are rejected under 35 U.S.C. 102(a) as being anticipated by Solovyov et al. (“Ex-situ Post-deposition Processing for Large Area $Y_1Ba_2Cu_3O_7$ Films and Coated Tapes”).

With respect to claims 40-47, 54-56 and Solovyov et al. teaches that metal oxyfluoride YBCO precursor films are deposited onto a substrate in a “partial pressure reactor” which varies from 100 mTorr to 30 Torr (page 2939, Column B, first and third full paragraphs) and has an atmosphere “substantially of” water vapor and oxygen (p. 2939, Column B, last paragraph; p. 2940, Column A, 2nd full paragraph, line 1; p. 2941, Column B, 1st full paragraph, lines 1-2).

With respect to claims 50-53, Solovyov et al. teaches that it is a 1 μm precursor film (see page 2941, Column B, first full paragraph).

With respect to claim 59, Solovyov et al. teaches that the superconductors produced have a J_c of about 1 MA/cm² (page 2941, column B, second full paragraph).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solovyov et al. ("Ex-situ Post-deposition Processing for Large Area $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_7$ Films and Coated Tapes").

With respect to claims 60-62, Solovyov et al. teaches that the film had a J_c of about 1 MA/cm² and also teaches that much higher J_c 's were measured at lower growth rates. It would have been obvious to one of ordinary skill in the art at the time the invention was made to maximize the J_c , since it has been held that discovering an optimum value or a result effective variable involved only routine skill in the art. In re Boesch, 617 F.2nd 272, 205 USPQ 215 (CCPA 1980). The artisan would have been motivated to optimize this property by the reasoned explanation that it is clearly dependent in part upon the growth rate.

Claims 48-49 and 57-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solovyov et al. ("Ex-situ Post-deposition Processing for Large Area $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_7$ Films and Coated Tapes") as applied to claim 40 above, and further in view of Iijima et al. (5650378).

Solovyov et al. teaches that the substrate is strontium titanate, but not that the strontium titanate is on a metal base.

Iijima et al. teaches that it is known in the art to use strontium titanate as a substrate for superconductor deposition, but that it is more desirable in some applications to form the superconductor on a metal tape and so it is known in the art in these cases to use an intermediate layer of strontium titanate (Column 1, lines 37-43 and 51-67) and that the metal tape is steel, nickel, copper, silver or alloys thereof (Column 2, lines 55-63). Iijima et al. further teaches that a buffer layer is used between the substrate and the superconducting layer which may be Y_2O_3 , MgO, or $SrTiO_3$ (Column 2, lines 53-55 and again in Column 7, lines 35-43).

It would have been obvious to modify the structure of Solovyov et al. by used a metal substrate and buffer layer because Iijima et al. teaches a metal substrate is preferred over a strontium titanate one for certain applications and further that a buffer layer is used with the metal substrate.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colleen P Cooke whose telephone number is 571-272-1170. She can normally be reached Mon.-Thurs. 8am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, her supervisor, Stan Silverman can be reached at 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Colleen P Cooke
Examiner
Art Unit 1754